

CLAIMS

What is claimed is:

1. An apparatus for burn-in testing comprising:
5 a device under test adapted to receive a body bias voltage;
a voltage supply for providing said body bias voltage to said device under
test; and
a wiring board for coupling said device under test and said voltage supply,
wherein said device under test is subject to a test temperature that is regulated
10 according to said body bias voltage.
2. The apparatus of Claim 1 wherein said body bias voltage is selected
to achieve a particular test temperature measured at said device under test.
- 15 3. The apparatus of Claim 1 further comprising a test controller coupled
to said device under test via said wiring board.
4. The apparatus of Claim 1 further comprising a voltage supply for
providing an operating voltage to said device under test.
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5. The apparatus of Claim 1 wherein said device under test comprises a
positive-channel metal-oxide semiconductor (PMOS) device.
6. The apparatus of Claim 5 wherein said body bias voltage is in the
25 range of approximately zero to five volts.

7. The apparatus of Claim 1 wherein said device under test comprises a negative-channel metal-oxide semiconductor (NMOS) device.

8. The apparatus of Claim 7 wherein said body bias voltage is in the
5 range of approximately zero to minus ten volts.

9. A method of burn-in testing of a device under test, said method comprising:

applying an operating voltage to said device under test;

10 applying a body bias voltage to said device under test, wherein said body bias voltage is selected to achieve a particular test temperature measured at said device under test; and

measuring temperature at said device under test.

15 10. The method of Claim 9 further comprising adjusting said body bias voltage to adjust temperature at said device under test.

11. The method of Claim 9 wherein said device under test comprises a positive-channel metal-oxide semiconductor (PMOS) device.

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12. The method of Claim 11 wherein said body bias voltage is in the range of approximately zero to five volts.

13. The method of Claim 9 wherein said devices under test comprises a
25 negative-channel metal-oxide semiconductor (NMOS) device.

14. The method of Claim 13 wherein said body bias voltage is in the range of approximately zero to minus ten volts.

15. An apparatus for burn-in testing comprising:

5 a plurality of devices under test, each device under test adapted to receive a body bias voltage, wherein the temperature at each device under test is monitored;

a voltage supply for providing body bias voltages applied to said devices under test; and

10 a wiring board comprising circuitry that individually couples each device under test to said voltage supply such that each device under test can receive a different body bias voltage.

16. The apparatus of Claim 15 wherein a body bias voltage applied to a device under test is selected to achieve a particular test temperature measured at
15 said device under test.

17. The apparatus of Claim 15 further comprising a test controller coupled to said device under test via said wiring board.

20 18. The apparatus of Claim 15 further comprising a voltage supply for providing an operating voltage to said devices under test.

19. The apparatus of Claim 15 wherein said devices under test comprise positive-channel metal-oxide semiconductor (PMOS) devices.

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20. The apparatus of Claim 19 wherein said body bias voltages are in the range of approximately zero to five volts.

21. The apparatus of Claim 19 wherein said devices under test comprise negative-channel metal-oxide semiconductor (NMOS) devices.

5 22. The apparatus of Claim 21 wherein said body bias voltages are in the range of approximately zero to minus ten volts.